

**I CLAIM:**

1. A method for creating a vertical search engine, comprising:

receiving a list of a plurality of keywords to be used for the vertical search engine  
on a network device, wherein the list of keywords includes general and specific keywords  
5 for a selected subject;

processing the list of plurality of keywords to create a refined list of keywords,  
wherein the processing includes adding, subtracting or modifying automatically the list of  
plurality of keywords;

creating a plurality of first index files associated with a plurality of first data files  
10 by checking a plurality of domain names from a plurality of domain name files associated  
with a domain name system for a computer network, wherein the plurality of first index  
files include a plurality of pointers to the associated data files, and wherein the plurality  
of first data files include a plurality of entries including electronic information extracted  
from a plurality of web-sites associated with a plurality of active domain names from the  
15 plurality of domain name files;

creating a plurality of second index files with associated plurality of second data  
files by searching the plurality of first index files for keywords from the refined list of  
keywords, wherein the plurality of second index files include a plurality of pointers to the  
associated plurality of second data files, and wherein the plurality of second data files  
20 include a plurality of entries including electronic information extracted from a plurality of  
web-sites associated with the plurality of active domain names for keywords from the  
refined list of keywords;

verifying that entries in the plurality of second index files are appropriate for the

selected subject;

creating a final index from the plurality of entries first index; and

making a vortal accessible on another network device via the computer network  
for the selected subject using the final index.

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2. The method of Claim 1 further comprising a computer readable medium  
having stored therein instructions for causing a processor to execute the steps of the  
method.

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3. The method of Claim 1 wherein the domain name system for the computer  
network includes the Domain Name System for the Internet.

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4. The method of Claim 1 wherein the plurality of entries including electronic  
information extracted from a plurality of web-sites associated with a plurality of active  
domain names from the plurality of domain name files include a title, description, a  
uniform resource locator, or a pre-determined amount of electronic content associated  
with a web-site associated with an active domain name.

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5. The method of Claim 1 wherein the processing step includes:  
eliminating keywords that are too generic or have multiple meanings;  
modifying keywords by adding alternative spellings or additional words; and  
adding automatically synonyms for keywords to the list of plurality of keywords  
to create the refined list of keywords.

6. The method of Claim 1 wherein the step of creating a plurality of first index files includes:

- opening a plurality of top-level domain name files associated with the domain
- 5 name system for the computer network;
- checking a plurality of domain names from the plurality of open top-level domain name files to determine whether any of the plurality of domain names are associated with an active web-site on the computer network;
- extracting domain names in the plurality of open top-level domain name files
- 10 associated with active web-sites on the computer network;
- storing the extracted domains names in a plurality of entries in a plurality of separate files, thereby creating a plurality of separate files including the plurality of entries; and
- sorting each of the plurality of separate files based on a pre-determined sorting
- 15 scheme to create a plurality of sorted separate files.

7. The method of Claim 6 wherein the step of opening a plurality of top-level domain name files associated with a domain name system including opening a .COM, .EDU, .GOV, .MIL, .NET or .ORG top-level domain name file associated with the

20 Internet domain name system.

8. The method of Claim 6 wherein the checking step includes attempting to visit a web-site on the computer network with a software spider to determine whether the web-

site is active.

9. The method of Claim 6 wherein the checking step includes extracting electronic content from an active web-site on the computer network.

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10. The method of Claim 6 wherein the extracting step includes:

(a) adding a first individual character component to a first file based on the first character of an entry, when the first individual character component was derived from an entry in one of the plurality of open top-level domain name files;

10 (b) moving the first character of the first individual character component to an end of the first individual character component, thereby exposing a next character and creating a next individual character component;

(c) adding the next individual character component to a next file based on the next character of the first individual character component;

15 (d) moving the next character of the next individual character component to an end of the next individual character component, thereby exposing a (next character+1) and creating a (next character+1) individual character component;

(e) adding the (next character+1) individual character component to a (next character+1) file based on the (next character+1) of the (next character+1) individual

20 character component;

(f) repeating steps (d) and (e) until first character of the first individual character component is reached.

11. The method of Claim 6 wherein the storing step includes storing the plurality of individual character components in a plurality of separate files including one file for each letter of the English alphabet (A-Z), and the numbers zero through nine.

5           12. The method of Claim 6 wherein the sorting step includes sorting each of the plurality of separate files based on an ASCII value of characters stored in the plurality of separate files.

13. The method of Claim 1 wherein the step of creating a plurality of first index  
10 files includes:

(a) selecting a keyword from the refined list of keywords;

(b) determining whether the selected keyword comprises multiple words, and if  
so,

(c) selecting a word with the greatest number of individual characters from  
15 the multiple words comprising the selected keyword,

(d) opening a one of a plurality of sorted separate files based on a first character of the selected word from the selected keyword, wherein the plurality of sorted separate file were created by indexing a plurality of domain name files associated with a domain name system for the refined list of keywords, and

20           (e) searching the open sorted separate file for the selected word from the selected keyword,

(f) repeating steps (c) through (e) for remaining words in the selected keyword;

and if not,

(g) opening a one of a plurality of sorted separate files based on a first character of the selected keyword, wherein the plurality of sorted separate file were created by indexing a plurality of domain name files associated with a domain name

5 system for the refined list of keywords, and

(h) searching the open sorted separate file for the selected keyword;

(i) determining whether the selected keyword has been found in the open separate sorted, file, and if so,

(j) adding an entry to a first index file for the selected keyword;

10 (k) repeating steps (a), (b) and (i) for remaining keywords from the refined list of keywords.

14. A method for indexing a plurality of domain name files, comprising:

opening a plurality of top-level domain name files associated with a domain name

15 system for a computer network;

checking a plurality of domain names from the plurality of open top-level domain name files to determine whether any of the plurality of domain names are associated with an active web-site on the computer network;

parsing domain names in the plurality of open top-level domain name files

20 associated with active web-sites on the computer network into a plurality of individual character components based on a pre-determined parsing scheme;

storing the plurality of individual character components in separate files, thereby creating a plurality of separate files including the plurality of individual character

components; and

sorting each of the plurality of separate files based on a pre-determined sorting scheme to create a plurality of sorted separate files.

5           15. The method of Claim 14 further comprising a computer readable medium having stored therein instructions for causing a processor to execute the steps of the method.

10           16. The method of Claim 14 wherein the step of opening a plurality of top-level domain name files associated with a domain name system including opening a .COM, .EDU, .GOV, .MIL, .NET or .ORG top-level domain name file associated with the Internet domain name system.

15           17. The method of Claim 14 wherein the domain name system for the computer network includes the Domain Name System for the Internet.

20           18. The method of Claim 14 wherein the checking step includes attempting to visit a web-site on the computer network with a software spider to determine whether the web-site is active.

            19. A method for creating a creating a plurality of index files, comprising:  
opening a plurality of top-level domain name files associated with a domain name system for a computer network;

checking a plurality of domain names from the plurality of open top-level domain name files to determine whether any of the plurality of domain names are associated with an active web-site on the computer network;

extracting domain names in the plurality of open top-level domain name files  
5 associated with active web-sites on the computer network;

storing the extracted domains names in a plurality of entries in a plurality of separate files, thereby creating a plurality of separate files including the plurality of entries; and

sorting each of the plurality of separate files based on a pre-determined sorting  
10 scheme to create a plurality of sorted separate files.

20. The method of Claim 19 further comprising a computer readable medium having stored therein instructions for causing a processor to execute the steps of the method.

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21. The method of Claim 19 wherein the step of opening a plurality of top-level domain name files associated with a domain name system including opening a .COM, .EDU, .GOV, .MIL, .NET or .ORG top-level domain name file associated with the Internet domain name system.

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22. The method of Claim 19 wherein the checking step includes attempting to visit a web-site on the computer network with a software spider to determine whether the web-site is active.



23. A vertical search engine system, comprising in combination:  
a vertical search engine server with associated database for indexing and  
searching a plurality of top-level domain name files associated with a domain name  
5 system for a computer network for a selected list of keywords for a selected topic, for  
indexing and searching electronic content from a plurality of web-sites identified by a  
plurality of domain names from the plurality of top-level domain name files and for  
creating a vortal index from the indexed plurality of top-level domain name files and the  
electronic content from the plurality of web-sites; and

10 a protocol stack on the vertical search engine server for communicating with other  
network devices on the computer network; and

a server network device for making a vortal accessible on a network device via  
the computer network for a selected subject using the vertical index created by the  
vertical search engine server.

15 24. The vertical search engine system of Claim 23 top-level domain name files  
associated with a domain name system including opening a .COM, .EDU, .GOV, .MIL,  
.NET or .ORG top-level domain name file associated with the Internet Domain Name  
system.

20 25. The vertical search engine system of Claim 23 wherein the domain name  
system for the computer network includes the Domain Name System for the Internet.